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A Social-Ecological Analysis of the Self-Determination Literature

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Published in 2013

Acknowledgements: The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R324A110040 to the University of Illinois/University of Kansas. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

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Citation:

Shogren, K. A. (2013). A social-ecological analysis of the self-determination literature. *Intellectual and Developmental Disabilities, 51*, 496-511. doi: 10.1352/1934-9556-51.6.496

Abstract

This paper uses a social-ecological lens to examine self-determination research, attempting to organize what is known (and unknown) about contextual factors that have the potential to impact the development and expression of self-determined behavior in individuals with disabilities across multiple ecological systems. Identifying and categorizing the contextual factors that researchers suggest influences self-determination has the potential to allow for the development of a framework that promotes systematic consideration of contextual factors when designing, implementing, and evaluating supports to promote self-determination. Directions for future research and practice are discussed.

A Social-Ecological Analysis of the Self-Determination Literature

In the disability field, promoting self-determination for youth and young adults with disabilities is recognized as best practice (Wehman, 2012) and has been identified as a key predictor of valued life outcomes (Shogren, Wehmeyer, Palmer, Rifenbark, & Little, *in press*). Researchers have explored the influence of personal characteristics, such as disability label (Wehmeyer et al., 2012) and cultural background (Shogren, 2011), and environmental characteristics, such as access to the general education curriculum (S. H. Lee, Wehmeyer, Palmer, Soukup, & Little, 2008) and opportunities for self-determination (Carter, Lane, Pierson, & Glaeser, 2006; Carter, Owens, Trainor, Sun, & Swedeon, 2009). This body of research suggests that self-determined behavior is reciprocally influenced by individual, family, and school characteristics.

A small number of researchers have begun to situate the diverse factors that can impact self-determination in a social-ecological perspective (Walker et al., 2011; Wehmeyer, Abery, et al., 2011). A social-ecological perspective acknowledges the complex interplay between a person and their environment, and has been applied to many areas of research. In the intellectual disability field, social-ecological theory emphasizes the importance of person-environment fit, as well as the diverse systems that influence human functioning (Schalock et al., 2010). The World Health Organization (2001, 2007) adopted a social-ecological approach, defining disability as an umbrella term for impairments, activity limitations, and participation restrictions.

Disability refers to the negative aspects of the interactions between an individual with a health condition (such as cerebral palsy, Down syndrome, depression) and personal and environmental factors (such as negative attitudes, inaccessible transportation and public buildings, and limited social supports) (World Health Organization, 2011, p. 7).

Researchers have also situated school-to-adult life transition services and supports in a social-ecological perspective (Hughes & Carter, 2012), highlighting the importance of promoting skills that are valuable in the diverse environments within which youth with disabilities function.

Walker et al. (2011) examined the impact of “social mediator variables” on self-determination, suggesting the importance of a social-ecological framework. They hypothesized that constructs like social effectiveness, social capital and social inclusion impacted the supports available to people with disabilities in the environments they functioned in, influencing opportunities for self-determination. For example, they suggest that environmental opportunities to make choices regarding where to live and work, mediates the relationship between intelligence and self-determination. Essentially, because people with intellectual disability more likely to live and work in more restrictive settings and therefore have fewer opportunities to make choices, these environmental opportunities mediate the relationship between intelligence and self-determination. Wehmeyer et al. (2011) elaborated on this social-ecological approach focusing on personal factors, such as intelligence and culture, suggesting that these factors moderate the relationship between self-determination interventions and outcomes and must be systematically considered in the design and implementation of interventions. Other research has focused on specific personal and environmental factors that impact relative levels of self-determination. For example, Shogren et al. (2007) explored the effects of several personal and environmental factors on student’s self-reported self-determination levels, finding a complex interplay between self-determination, student characteristics, and school program characteristics.

The benefits of a social-ecological approach to understanding the experiences and outcomes of people with intellectual disability are numerous, including the possibility of an integrative framework for thinking about the diverse contextual factors that influence the

attainment of valued outcomes, including self-determination. Shogren, Luckasson, and Schalock (2012) define context as “a concept that integrates the totality of circumstances that comprise the milieu of human life and human functioning.” They elaborate that “as an independent variable, context includes personal and environmental characteristics that are not usually manipulated such as age, language, culture and ethnicity, gender and family. As an intervening variable, context includes organizations, systems, and societal policies and practices that can be manipulated to enhance functioning.” This definition suggests that there are multiple levels of influence, and to best understand the relationship between these factors and valued outcomes, such as self-determination, the development of a systematic framework for understanding of the totality of circumstances that exert an influence must be undertaken.

Brofenbrenner’s (1979) ecological theory is often used to operationalize the diverse contexts that influence the functioning of individuals with intellectual disability (cf. Schalock et al., 2010). Brofenbrenner describes several interrelated systems that influence human functioning with the individual at the center and the systems that shape the individual’s experiences moving out from the center. These systems include: (a) the microsystem (i.e., the immediate social setting, including the person, family and social networks), (b) the mesosystem (i.e., the school and community environment that influence the individual), and (c) the macrosystem (i.e., the overarching patterns of culture and society). It is also asserted that the various systems change and interact in diverse ways over time (chronosystem).

The purpose of this paper is to use a social-ecological lens to analyze self-determination research, attempting to organize what is known (and unknown) about contextual factors that have the potential to impact the development and expression of self-determined behavior in youth and young adults with disabilities across the systems identified by Brofenbrenner (1979). Identifying

and categorizing the contextual factors that researchers suggest influences self-determination has the potential to allow for the development of a framework that promotes systematic consideration of contextual factors when designing, implementing, and evaluating supports to promote self-determination. Research has consistently suggested that despite the importance placed on self-determination in policy and research, there are significant gaps in the degree to which practitioners implement strategies to support self-determination that meet the needs of individuals and their families. Understanding, individual, family, social network, school, community, and societal factors that have the potential to influence self-determination, can further our understanding the complexity of promoting valued outcomes, such as self-determination, and facilitate the identification of pathways for addressing this complexity in research, policy, and practice, something that has been missing from the literature to date.

Contextual Factors

In the following sections, we highlight contextual factors that have been identified in the self-determination literature as potentially influencing the development and expression of self-determination in individuals with disabilities across the microsystem (i.e., individual, family, and social network factors), mesosystem (i.e., school and community factors), macrosystem (i.e., societal factors), and chronosystem. Because the majority of the literature has focused on transition-age youth with disabilities, contextual factors (e.g., the school context) relevant to this population will be emphasized.

Microsystem

Individual factors. In self-determination research, individual factors have received significant attention and have been explored both as an independent variable in analyses of individual's relative levels of self-determination and as a moderating variable in the analysis of

the impact of interventions to promote self-determination. One of the most frequently cited factors is disability label, although a smaller subset of literature has explored other characteristics including age, gender, race/ethnicity, and culture.

Disability label. One of the most consistently analyzed variables in the self-determination literature is disability label (Agran, Hong, & Blankenship, 2007; Carter et al., 2006; Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012; Shogren et al., 2007; Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2013; Wehmeyer et al., 2012). Researchers have established that disability label influences relative levels of self-determination. In several studies researchers have found that students with lower levels of cognitive ability tend to report lower levels of self-determination (Shogren et al., 2007; Wehmeyer et al., 2012). Other researchers have reported differences between students with differing disability characteristics (e.g., emotional disturbance and learning disabilities; Carter et al., 2006), and still others have suggested the need to attend to specific support needs associated with different disabilities, including visual impairments (Agran et al., 2007) and autism (Wehmeyer, Shogren, Zager, Smith, & Simpson, 2010). In a recent study, Shogren and colleagues (in press) examined the relative levels of three of the four essential characteristics of self-determination (i.e., autonomy, psychological empowerment, self-realization) using data from the National Longitudinal Transition Study-2 in students across the 12 disability categories recognized under the Individuals with Disabilities Education Act (i.e., autism, deaf-blindness, emotional disturbance, hearing impairment, intellectual disability, learning disability, multiple disabilities, orthopedic impairment, other health impairment, speech and language impairment, traumatic brain injury, and visual impairment) finding significant variability within and across disability groups, suggesting that while disability influences self-determination, other factors also exert a

significant influence. The researchers suggested that looking at one factor (e.g., disability label) in isolation may mask the broader set of factors that reciprocally influence self-determination.

Age. Researchers have repeatedly identified self-determination as a developmental construct, suggesting that the skills and attitudes associated with self-determination develop over time as children and youth have opportunities to learn and apply these skills and develop attitudes associated with self-determination. Therefore, self-determination looks different over time, and different supports are needed over time to support the development of self-determination. Researchers have identified strategies, for example, that can be used in early childhood to support the development of early skills associated with self-determination (Erwin et al., 2009; Erwin & Brown, 2000; Shogren & Turnbull, 2006). Researchers have also found that students show differences in their relative levels of self-determination across the middle and high school years (Y. Lee et al., 2012), with younger students showing lower relative levels of self-determination.

Gender. Although gender has been examined less frequently, researchers have suggested that gender is an important variable to consider when examining self-determination, although research findings are mixed on the specific relationship between gender and self-determination suggesting an interactive effect of gender and the other factors discussed throughout this section. For example, Shogren et al. (2007) found female adolescents with disabilities from the United States had higher levels of self-determination than males, while Nota, Ferrari, Soresi and Wehmeyer (2007) when working with Italian adolescents with disabilities found males had higher levels of self-determination.

Race/ethnicity. Several researchers have suggested that race/ethnicity may influence self-determination. For example, Leake and Boone (2007) used focus groups to get the perspectives of Black, Asian, Filipino, Hawaiian, Hispanic, Pacific Islander and White students, teachers, and parents about self-determination and identified subtle differences across racial and ethnic groups, particularly related to reported responsibility to families influencing the expression of self-determined behavior. Trainor (2005) reported similar findings for Black, Hispanic, and White youth, but also reported that there was limited congruence between student's self-reported goals, and the goals targeted in their school-based transition plan. Shogren (2012) examined the perspective of Hispanic mothers, who suggested that it was not as simple as understanding race/ethnicity when attempting to understand differences in self-determined behavior and instead suggested focus be placed on each family's unique definition of self-determined behavior. Shogren, Kennedy, Dowsett, Garnier-Villarreal and Little (in press) empirically examined the relative self-determination of Hispanic, African American, and White youth on three of the four essential characteristics of self-determination using data from the National Longitudinal Transition Study-2, and found that Hispanic youth tended to score lower than African American or White youth in autonomy, self-realization, and psychological empowerment although these differences were not significant in all disability groups recognized under IDEA.

Culture. Each of the individual level factors described above (in addition to others) can be thought of as defining one's personal culture (Trainor, Lindstrom, Simon-Burroughs, Martin, & Sorrells, 2008). Increasingly it is recognized that culture is not the same as categorical labels (e.g., Caucasian, Hispanic, African American), but instead is shaped by multiple factors, including gender, disability, race/ethnicity, language, and socioeconomic background, each of which has the potential to influence self-determination. Researchers have explored multiple

cultural factors, ultimately suggesting the importance of a “flexible self-determination perspective” (Shogren, 2011, p. 123) that seeks to use an understanding of each of these factors in considering the development of self-determination, opportunities to promote it, and supports to enable its expression.

Family factors. In addition to individual-level factors, family factors also have been shown to influence self-determination. Researchers have examined the influence of family beliefs on the expression of self-determined behavior in the home. Zhang (2005) surveyed parents and analyzed differences in the degree to which families reported promoting self-determination in the home and found that there were differences based on race/ethnicity, socioeconomic status, and disability status. For example parents of children without disabilities were more likely to promote self-determination in the home, as were parents with higher levels of education. Parents from non-Western cultures were more likely to emphasize independence than parents from non-Western cultures. Carter and colleagues (2010) found parents tended to report that their children’s capacity for self-determination lower than youth themselves or their teachers. For students with intellectual and developmental disabilities, Carter and colleagues (2011) found that parents tended to report that self-determination skills were important, but that their children engaged in relatively few of the self-determination skills in the home. Leake and Boone (2007) found that parents valued self-determination for their children but sometimes operationalized it differently than their children or the school system. Shogren (2012) found that Hispanic mothers engaged in a number of activities in the home to promote self-determination skills ranging from choice-making to goal setting to self-advocacy, but that parents tended to engage in activities very differently than schools. Further, parents did not feel their efforts to

promote self-determination within their cultural framework were supported by the school or the disability service system.

Few empirical studies have examined strategies to support parents to teach and create opportunities for self-determination skills in the home, despite the common statement that supporting self-determination across the home and school environment is critical. For example, Field and Hoffman (1999) argue that family involvement is necessary to support students with more intensive support needs to learn self-determination skills. Lee and colleagues (2006) introduced a model, the Self-Determined Learning Model of Support, to facilitate home-school connections around promoting self-determination, supporting families to reinforce at home what teachers are teaching at school. Abery and colleagues (1994) developed a self-determination family education curriculum. However, limited empirical research has examined the efficacy of such curricula or approaches to supporting families to promote self-determination in the home and to collaborate with teachers to coordinate home-school self-determination activities.

Social networks. In addition to individual and family-level factors, another factor that influences the development and expression of self-determination is the social networks available to and influencing youth with disabilities. Social networks are influenced both by the social skills of youth with disabilities as well as their peers, the relationships formed between students with disabilities and their peers, and the degree to these relationships are leveraged to promote positive outcomes. Researchers have found a relationship between self-determination and social skills. For example, Nota and colleagues (2007) found social skills were related to relative self-determination status. Walker et al. (2011) emphasized the importance of bonding social capital (affiliation with others with similar psycho-social characteristics) and bridging social capital (affiliating with others those with different characteristics) to enhancing the self-determination of

individuals with disabilities, arguing social capital can mediate student-level characteristics that introduce additional support needs.

Researchers have used peers during the process of teaching self-determination skills. For example, Gilberts and colleagues (2001) used peers to support students with severe disabilities to self-monitor their behavior in general education classroom settings. Hughes and colleagues (2000) taught students with severe disabilities self-determination skills that enabled them to initiate social interactions with their peers. Clearly involving social networks in efforts to promote self-determination has potential benefits for all individuals, particularly as researchers have asserted that self-determination has relevance for all youth, not just youth with disabilities (Shogren, Lopez, Wehmeyer, Little, & Pressgrove, 2006).

Mesosystem

Individual, family, and social network factors exert a significant influence on self-determination, but these factors are not experienced in a vacuum. They operate within a broader system, the mesosystem that encompasses the interaction between individual, family, and social network factors and the characteristics and culture of the systems that provide support. Most salient for youth and young adults with disabilities are (a) school systems, (b) disability support systems, and (c) community supports. In this section we will describe what research has suggested about relevant factors in each of these domains.

School factors. The degree to which schools facilitate or introduce barriers to self-determination activities can significantly impact the degree to which youth with disabilities develop self-determination. Even with the significant attention directed to the importance of self-determination over the last 20 years in policy and research, barriers remain to the implementation of strategies in educational systems that enable youth to exit high school as self-

determined young people. Several factors associated with the school context have been identified in the literature as facilitators of and barriers to self-determination.

Teacher characteristics. Researchers have identified a lack of pre- and in-service teacher training (Mason, Field, & Sawilowsky, 2004; Wehmeyer, Agran, & Hughes, 2000) as well as competing demands for instructional time (Eisenman & Chamberlin, 2001) as major factors that impact the capacity of teachers to teach self-determination skills as well as the opportunities they create for students to apply these skills. But, even when schools do implement activities to promote self-determination, researchers have found significant disconnects between activities that are implemented by schools and youth and family perceptions of meaningful self-determination activities (Shogren, 2012; Trainor, 2005). This body of research suggests clear teacher and school influences on the opportunities youth have for the development of self-determination.

School program characteristics. Researchers have consistently suggested a relationship between self-determination, inclusion, and access to the general education curriculum (S. H. Lee et al., 2008; Shogren, Palmer, et al., 2012; Shogren et al., 2007; Zhang, 2001). For example, Shogren et al. (2007) found that inclusive experiences predict relative levels of self-determination, although Zhang (2001) found there may be more support for self-determination instruction in segregated classrooms. Other researchers have found that access to the general education curriculum is related to self-determination (S. H. Lee et al., 2008; Shogren, Palmer, et al., 2012). But, there are still questions left to be answered. We do not know if inclusion and access predict self-determination or if self-determination predicts inclusion and access. Either way, we do know that self-determination is associated with specific classroom and instructional experiences, emphasizing the importance of teaching self-determination skills and creating

opportunities for students to frequently use these skills in supportive environments characterized by high expectations.

Opportunities for self-determination. The degree to which students have opportunities to express their self-determination skills is also important. For example, researchers have consistently found that attending one's IEP meeting does not predict self-determination but that taking on leadership roles (e.g., introducing self, stating goals, etc.) in IEP meetings does predict self-determination (Shogren, Wehmeyer, Palmer, & Paek, *in press*; Shogren et al., 2007). The implementation of instruction to promote leadership in IEP meetings has been shown to increase student self-determination (Wehmeyer, Palmer, Lee, Williams-Diehm, & Shogren, 2011) and research has shown that professionals view student's self-determination capacity higher when they lead their own meetings (Branding, Bates, & Miner, 2009).

Disability support system factors. As youth prepare for the transition to adult life, other disability service systems take on an increasingly important role. Collaboration across systems has been identified as a critical feature of transition planning (Noonan, Morningstar, & Erickson, 2008; Wehman, 2012), and the degree to which self-determination is supported by these other systems will influence adult outcomes. For example, researchers have consistently shown that adults with intellectual disability are able to exercise more self-determination when they have access to community-based living and working environments (Stancliffe, 2001; Stancliffe, Abery, & Smith, 2000; Wehmeyer & Bolding, 1999, 2001), however the availability of supports in community environments is not available to all individuals with disabilities as highlighted by Walker et al. (2011). Further, the degree to which systems like vocational rehabilitation support self-determination in the employment process varies significantly (Agran, Storey, & Krupp, 2010).

Community factors. Outside of disability specific services and supports, the supports available within communities for people with and without disabilities can significantly impact self-determination. For example, Balcazar and colleagues (2012) developed a program to support positive transition outcomes for youth with disabilities from low-income communities, and one key feature was promoting community engagement in the process of supporting transition. The researchers found that students who participated in the program were significantly more likely to enroll in postsecondary education. Other researchers have suggested the critical importance of employer support to enable youth and young adults to use self-determination skills, such as self-management systems, to experience employment success (Irvine & Lupart, 2008). Still others have suggested the importance of educating and involving community members, such as Chambers of Commerce and employer networks to create communities that are supportive of self-determination and community employment for youth and young adults with disabilities (Carter, Trainor, et al., 2009). Beyond employment, participation in recreational and leisure pursuits is a key part of life for many individuals with and without disabilities. Datillo and Rusch (2012) developed a problem solving strategy to enable individuals with disabilities to make choices about leisure activities and address barriers they may encounter in accessing community-based leisure activities.

Macrosystem

Bronfenbrenner (2005) describes the macrosystem as the “generalized patterns” (p. 54) of the broader social structures and cultural factors that influence social structures and activities at the meso- and micro-system levels. Behaviors of individuals, social networks, and organizations are all embedded in the larger culture of society and this larger culture exerts an indirect influence on individual and organizational-level factors. Although research has not directly

addressed the relevance of factors at this level of the ecological system to self-determination specifically, research and scholarships in other areas related suggests the potential relevance of two societal level factors to self-determination: (a) cultural norms and beliefs and (b) public policy.

Cultural norms and beliefs. Researchers have suggested that cultural beliefs about disability can shape the experience of people with disabilities, which likely impacts their self-determination. For example, Carter, Trainor, et al., (2009) examined perceptions of members of community employment networks, including Chamber of Commerce members. They found that community members were significantly less likely to rate an employment activity as “feasible” if “youth with disabilities” were referenced as opposed to simply “youth” (p. 148). Such attitudes may directly and indirectly impact the employment opportunities available to youth with disabilities. Researchers have also found that youth without disabilities are often not aware of the stigma that pejorative terms (such as the r-word) carry and the marginalizing impact that such words can have (Siperstein, Pociask, & Collins, 2010).

Public policy. Researchers have also suggested that public policy is a macrosystem level factor that can exert a significant influence on the experiences of people with disabilities. Shogren and colleagues (2009) suggest that there is an interactive relationship between public policy and practice. When policies are developed that promote valued outcomes, such as self-determination, practice is shaped by these policies and future policies are shaped by the outcomes of these practices. For example, the introduction of Medicaid policies supportive of self-direction that enable individuals with disabilities and their families to direct the hiring of staff and/or the managing of personalized budgets have created significant opportunities for individual choice and personal self-determination in home and community based services

(HCBS; O'Keeffe et al., 2009). These policies have been driven by increasing demands for community-based services and potential cost-savings of consumer-direction (Heller & Caldwell, 2005). The translation of these policies to practice, however, remains a work in progress as variability in HCBS programs from state to state introduce significant discrepancies in the experiences of individuals with disabilities and their families. Consumer-direction requires significant systems change as well as attitudinal changes in the individuals that work in those systems – essentially change across multiple ecological systems. However, research has suggested that when consumer-direction is implemented individuals with disabilities and their families have more positive health, social, and economic outcomes (Caldwell, 2006). This suggests that when policy is enacted that promotes self-determination and other desired individual and family outcomes, practices may be implemented, over time, that are more likely to lead to desired outcomes.

Chronosystem

Finally, ecological systems theory acknowledges that change occurs over time in the individual and the environment. For example, family structure and functions may change over time (Turnbull, Turnbull, Erwin, Soodak, & Shogren, 2010) and new frameworks for delivering supports and services, such as the supports paradigm (Thompson et al., 2009) emerge. Each of these changes becomes part of the ecological system that impacts self-determination. Awareness of these factors can assist researchers and practitioners in understanding the cultural variables that shape the experiences of people with disabilities and society.

Discussion

In the previous sections, the impact of multiple individual, family, social network, school, community, and societal factors on the development and expression of self-determination were

described. To date the majority of empirical research has focused on exploring microsystem level factors, specifically individual-level factors such as disability label as an independent and moderating variable. However, when the literature is examined comprehensively, it becomes clear that a complex array of factors across multiple ecological systems impacts the development and expression of self-determination. This comprehensive perspective, however, is lacking from the majority of research in the field, particularly research examining the impact of interventions to promote self-determination which tend to focus on a limited and narrow array of contextual factors when examining efficacy and effectiveness. In the following sections, I describe potential implications of broadening this perspective and situating self-determination research in a social-ecological perspective driven by assessing and understanding context.

Implications of Situating Self-Determination in a Social-Ecological Perspective

As mentioned in the *Introduction*, despite the acknowledged importance of self-determination to youth and adults with disabilities, there remain significant gaps in research and practice related to self-determination. One potential reason for these issues is the lack of systematic considerations of context in both research and practice. Specifically, in research, a narrow range of factors is typically considered when attempting to examine self-determination or interventions to promote self-determination, limiting our understanding of the range of contextual factors that actually impact the development of self-determination, the effectiveness of self-determination interventions, and the factors that can be used to develop and implement meaningful self-determination supports in schools and communities. For example, researchers may work in a classroom to test the efficacy of a curriculum or instructional practice to promote self-determination. They may look at the impact of certain student-level factors, such as disability label and age, but they may fail to examine teacher or administrator attitudes and the

impact this has on the delivery of the intervention and its sustainability over time. They may also implement the intervention class-wide, but fail examine the impact of additional student-level factors, such as cultural factors, if results are aggregated at the classroom level, and the nesting of the data within students is not considered. This limited consideration of personal culture and school, community, and systems level factors in research then leads to the implementation of an intervention in practice that is described as research-based, but not equipped to address the unique and individualized factors that impact each student, classroom, and school.

Situating self-determination within a social-ecological perspective affords an opportunity to bring increased attention to the person-environment interaction, specifically the complex interplay between micro, meso, and macro-system level factors. It also highlights the importance of teaching skills at the student level and creating environmental opportunities for the expression of these skills at the school, community, and societal level. In Table 1, a framework for considering key contextual factors that impact self-determination at each level of the ecological system is described. This framework provides a starting point for thinking systematically about the diverse student, family, social network, school, and community factors reviewed in the previous sections. Future research is needed to further examine the impact of these factors in combination, as well as additional factors that impact variability in outcomes. Such research can lead to a cataloguing of the individual and ecological factors that potentially impact self-determination and interventions to promote its development, and the development of assessment strategies to effectively individualize interventions to various ecologies.

Developing a comprehensive system of support for self-determination. In addition to bringing attention to the importance of concurrently teaching skills and promoting environment

opportunities for self-determination, a social-ecological perspective highlights the importance of building a comprehensive system of support for self-determination. Supports are defined as “resources and strategies that aim to promote the development, education, interests and personal well-being of a person and that enhance individual functioning” (Schalock et al., 2010, p. 105). Supports may include specific teaching strategies enabling individuals to learn goal setting or problem solving skills at the microsystem level, as well as parent education using culturally responsive strategies to promote self-determination in the home. In building a comprehensive system of support, consideration must be given to supports needed across ecological systems. A system of support is defined as “the planned and integrated use of individualized support strategies and resources that encompass the multiple aspects of human performance in multiple settings” (Schalock et al., 2010, p. 224). In addition to microsystem level supports, systems of supports must also give attention to meso- and macro-system level supports, including teacher and administrator training on self-determination and the use of community connectors who focus on identifying ways to engage and promote self-determination and active engagement in community issues amongst people with disabilities. Table 2 highlights potential strategies to support self-determination across the various levels of the ecological system. Critical to the implementation of these efforts to implement a social-ecological perspective will be thinking about supports across diverse ecologies simultaneously, and identifying the most salient factors to address to promote valued outcomes at each level of the ecology.

Integrative Framework for Understanding, Assessing, and Incorporating Contextual Factors into Self-Determination Research, Policy and Practice

Just as Shogren, Luckasson, and Schalock (2012) acknowledge, addressing contextual factors and bringing a social-ecological perspective into research and practice introduces

significant complexity. An adoption of social-ecological perspective necessitates that a broad array of individual, family, social network, school, community, and societal factors be considered simultaneously, which has not been typical in research, policy, or practice in the disability field. A large body of literature suggests the complexity of attempting to coordinate supports across ecological systems, such as the individual, family, school, and adult service system for transition age youth (Noonan et al., 2008) as well as the issues encountered when attempting to engage in reciprocal research to practice or policy to practice (Cook & Odom, 2013; Meyer, Park, Grenot-Scheyer, Schwartz, & Harry, 1998; Snell, 2003). Much of complexity occurs because systems have emerged to serve siloed functions (e.g., family's serve family-related needs, school serve school-related needs, and disability service systems service post-school needs), which severely restricts communication within and across systems and acts to isolate individuals within each system. This is counter to a social-ecological approach which emphasizes the need to simultaneously consider and address individual, family, social network, school, community, and societal factors when building systems of supports for self-determination and valued outcomes. Systems must adapt to incorporate the social-ecological model of disability, including its focus on interactions between the person and the multiple environments they function in. But, systems change, which involves changes in policies, practices, and attitudes, is a long, difficult, and complex process influenced by many personal and environmental factors. Participatory research and practice approaches must be adopted and issues related to sustainability and context validity must be addressed (Meyer et al., 1998). For example, there cannot be a one size fits all approach to understanding, assessing, and incorporating contextual factors in self-determination research, policy, and practice. Relevant stakeholders across ecological systems must develop strategies to assess themselves and examine

what policies and practices support and impede the achievement of self-determined lives. Stakeholders must also explore the models of disability they adopt and the impact of these models on supports for people with disabilities. Researchers, practitioners, and policy makers must shift their models of thinking and working, recognizing that the silos that often exist within and across research, policy, and practice must be torn down if an integrative social-ecological approach is to be actualized. However, such an approach is much more complex than simplistic, siloed approaches and necessitates different research, policies, and practices as well as incentives to promote systems change.

Adopting an integrative framework for context provides a means to move beyond limited and simplistic approaches to addressing the influence of contextual factors on self-determination and instead to create systematic strategies that allow for the assessment and cataloguing of multiple factors that impact outcomes. It necessitates further attention be directed to parent support, peer support, teacher training, and societal awareness. It also necessitates considering how self-determination fits within other social-ecological approaches that are increasingly being adopted in school and adult service systems, such as positive behavior supports and problem-solving response to intervention (RtI) models in the school context (Sailor, 2009; Sailor, Dunlop, Sugai, & Horner, 2009). For example, increased attention has been directed to a problem-solving approach to RtI that focuses on tiered supports and parent, school, and community partnerships to promote success (Sailor, 2009). Self-determination has yet to be systematically considered within these comprehensive school reform efforts, despite the fact that it is acknowledged as a valued outcome of education (Wehman, 2012). Further, flexible models of instruction, such as the Self-Determined Learning Model of Instruction (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000) that can be overlaid on academic or transition-related

instruction and have been shown to impact student academic and goal attainment outcomes (Shogren, Palmer, et al., 2012) have the potential to both enhance academic and transition-related outcomes within the context of a problem-solving RtI model. In the adult service context, the current focus on person-centered services and assessing and addressing support needs (Schalock, Gardner, & Bradley, 2007) necessitates a focus on self-determination, however the systematization of this focus has remained limited. To promote valued outcomes including equality of opportunity, independent living, economic self-sufficiency, and community participation (Shogren & Turnbull, 2010) we must move from our traditional approaches of studying self-determination and its development in isolation and consider situating it within the larger context of system reform that is occurring in the chronosystem. As mentioned previously, assessment tools are needed to catalogue the ecological contexts that influence self-determination and interventions need to be developed that can be tailored to the findings from ecological assessments. The social-ecological model and systematic frameworks for assessing and understanding context must be developed and taken seriously in research, policy, and practice.

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Table 1

A framework for considering contextual factors that impact self-determination

Contextual Factors across the Ecological Systems	
Microsystem	Key Considerations
Individual Factors	
Disability	Research has consistently shown that disability label is related to self-determination, but understanding support needs and personal goals may be just as important
Age	Self-determination is a developmental construct, and appropriate instruction and support strategies must be considered given the student's age and previous experience with self-determination
Gender	Research is mixed on the impact of gender on self-determination, but gender (particularly in some cultural contexts) may shape previous experiences and expectations for self-determination
Race/Ethnicity	Research has suggested that race/ethnicity influences relative self-determination levels; however as with the previous factors, race/ethnicity is only one element of each individual's personal culture that shapes self-determination
Culture	Each individual's personal culture is shaped by many factors, including disability, age, gender, race/ethnicity. Issues related to socioeconomic status and living environment are also often cited in models of personal culture (Trainor et al., 2008). Considering the unique combination of student-level factors (as well as family and community factors) will be important to understanding the influence of culture on self-determination.
Family Factors	Parents often receive limited education or information on self-determination, how to promote it, and what it can mean to their children. Parents past experiences and personal culture shape how they define and support self-determination. Understanding these factors is critical to understanding the home environment and building partnerships across home, school, and community settings.
Social Networks	Self-determination is also important for peers without disabilities and other members of the community. Contextualizing self-determination as an issue relevant for all individuals may remove stigma and bring increased attention to skills and attitudes that are meaningful for all individuals, and create natural opportunities for peer support.
Mesosystem	
School Factors	
Teacher characteristics	Teachers in general and special education report a lack of pre- or in-service preparation for addressing self-determination. Pre and in-service preparation that addresses teacher competencies as well as teacher attitudes toward self-determination has been cited as an

	important facilitator and barrier to self-determination (Thoma, Baker, & Saddler, 2002)
School program characteristics	Relationships have been demonstrated between self-determination and characteristics of school programs, specifically inclusive education opportunities, access to the general education curriculum, and student involvement in transition planning. Schools may differ, however, in their support for these efforts. Having an impetus person is often necessary for the initiation of self-determination activities in schools (Eisenman & Chamberlin, 2001)
Other Disability Service System Factors	As for schools, the skills and attitudes of support providers across disability service systems are critical to the success of efforts to promote self-determination. Research has shown that after exposure to individuals with disabilities using self-determination skills, attitudes toward the possibility of self-determination for individuals with disabilities can change (Branding et al., 2009)
Community Factors	Community attitudes and support for the full inclusion of individuals with disabilities can influence the opportunities available for individuals to be self-determining and actively engage in their communities
Macrosystem	
Cultural Norms and Beliefs	Cultural perceptions of disability, such as the degree to which a medical versus a social-ecological perspective is adopted can influence the outcomes of people with disabilities
Public Policy	Policies at the federal, state, and local level can influence opportunities and support for self-determination. Policy “on the books” and policy “on the streets” can differ significantly and must be examined (Stowe & Turnbull, 2001).
Chronosystem	Change occurs over time in research, policy and practice. Change can be both rapid and slow and likely impacts different contexts in divergent ways over time.

Table 2

Strategies to Promote Self-Determination across the Various Levels of The Ecological System

Microsystem	
Student	Appropriate self-determination assessment Self-determination interventions that are culturally responsive and of high quality Provide instruction, opportunities, and supports for self-determination concurrently
Family	Family support and education Family involvement in support planning
Social Network	Peer support and education Peer involvement in self-determination interventions, opportunities, and supports
Mesosystem	
School	Teacher pre- and in-service training on self-determination and social ecological perspective Teacher expectation raising activities Administrator knowledge and support of self-determination Having an “impetus” person within a school to push self-determination activities Embedding self-determination throughout the curriculum Creating multiple opportunities for self-determination across the school day and throughout school activities
Other Disability Service System	Support provider training on self-determination and the social-ecological perspective Support provider expectation raising activities Self-determined planning and supports Multiple opportunities for self-determination
Community	Community education Community access Community resources and supports Taking active steps to involve community leaders, employers, and recreation/leisure programs in efforts to promote self-determination
Macrosystem	
Cultural Norms and Beliefs	Public education and awareness programs
Public Policy	Policy (and regulations) based on core concepts, including self-determination Focus on alignment of policy “on the books” with policy “on the streets”
Chronosystem	Recognition and celebration of positive changes Using history to shape policy and practice changes